DETAILED ACTION

1. This communication is responsive to the communication filed on 01/05/2010. Claims 1 and 3-31 are pending.

Response to Arguments

2. Applicant's arguments, see Response , filed 01/05/2010, with respect to the rejection(s) of claim(s) **1,3-28 and 31** under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Benedyke et al. (US Patent 6,990,089).

On page 2 of the Response Applicant asserts that "causing conveyance of transport related information between entities in the asynchronous transfer mode and the internet protocol transport networks to control the transport bearers in the transport network layer", as recited in Applicant pending claim 1.

Examiner respectfully disagrees Kumar disclose having a the IWU transporting a bearer signaling message such as a control signaling protocol between an ATM edge gateway and a IP edge gateway. It is known in the art Q.2630.1 controls call bearers on a transport layer.

On pages 3 and 4 of the Response Applicant asserts Willards does not disclose " the served user transport element. Examiner admittedly error in the interpretation of the "served user transport element". However, "served user transport element" was interpreted in the broadest most reasonable interpretation. Willars does have a mobile

telecommunication system UTMS whereby signaling frame protocol data along with a served user generated reference (SUGR) interpreted as "served user transport element. Although, the prior art "served user generated reference" is name different from the instant application term "served user transport element" is still have the same functionality as the claimed invention whereby providing as a indication between the IP and ATM networks for connection setup. See rejection below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1,3-28 and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (US Patent 7,072,329) in view of Kumar (US Patent 7,477,638) and further in view of Benedyke et al. (US Patent 6,990,089).

With regard to claim 1, Willars teach a method, comprised: causing linking an of inter-working function with an asynchrous transfer mode transport network an internet protocol transport network. **Willars et al. disclose having inter-working function having ATM interface and IP interface which connects a ATM and IP network , see abstract and fig. 3A)**; configuring said inter-working function to receive a served

user transport element of an existing protocol, using the existing protocol to establish data transport bearers in the asynchronous transfer mode transport network. **Willars et al. disclose having a interworking function or interworking gateway represented by interworking gateway 50A interpreted as a " interworking function" transport layer interworking gateway 50 providing connection to a ATM transport bearer, see column 10n lines 29-38)** to adapt a new protocol to control the transport bearers in the Transport Network Layer**. Willars et al. disclose having a interworking function or interworking gateway represented by interworking gateway 50A interpreted as inter-working "inter-function", see column 10 lines 29- 38) and transport bearer initiating procedure which utilizing the interworking with q.all2 signaling, see column 10 46-49 and uses a binding identification such as served user generated reference interpreted as a "user defined information element" used in IP - ALCAP protocol establishing a transport bearer in the transport network, see column 11 lines 1-53).**

However, Willars et al. does not explicitly disclose causing conyeance transport related information between entities in asynchronous transfer mode and an internet protocol transport networks to control the transport bearers in the transport network layer. **Kumar disclose having interworking of IP voice with ATM voice using server-based control, see title. Kumar further disclose the interworking unit (IWU) 212 uses the ATM address information interpreted as " transport related information" forwarded by the VoIP call agent 214 to set-up an ATM path [such as a Switched Virtual Circuit (SVC) or an AAL2 channel] to the VoATM edge**

device of VoATM edge network 206, see col. 3 57-67). In addition, Kumar disclose having a the IWU 400 transporting a bearer signaling message such as a control signaling protocol Q.2630.1 between an ATM edge gateway and a IP edge gateway, (see fig. 4, col. 4 lines s 60-67 and col. 8 lines s 1-67).It is known tin the art signaling bearer information is done on a transport layer.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a interworking unit with a utilizing a control protocol which is taught by Kumar into the Willars telecommunication system providing reliable interworking function efficient supporting flexible bandwidth and varying quality of service needs. One will have the motivation implement interwork function using control protocol to a control circuit switched information within a connectionless network.

The combination of Willar and Kumar does not explicitly disclose having a inter-working function to use to send a served user transport element of an existing protocol. **Benedyk et al. disclose having a methods and systems for routing messages in a radio access network, (see title) . Benedyk et al. further disclose having a RAN gateway 304 interworking between a ATM network and a IP–based network, (see fig. 5 and col. 6 lines s 1-5) whereby receiving Q.2630.1 message interpreted as a " existing protocol" which is known in the art a protocol to transmit served user transport ,(see col. 7 lines s 12-20).Although the served user transport element is not explicitly stated, it is inherited with a the Q.2630.1 protocol message.**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a Q.2630.1 message which is taught by Benedyk et al. into Willar's modified telecommunication system in combination with Kumar efficiently utilizing network resources whereby ensuring quality of service. One will have the motivation to use a transport control protocol such as Q.2630.1 within a telecommunication system for efficiently establishing and releasing circuit switched AAL2 bearer channels.

With regard to claim 3, Willars et al. further teach said transport related information includes at least one: transport network layer address information, transport network layer resource information, transmission time interval of the transport network layer user, packet size information and quality of service information. Willars **et al. disclose having a interworking with q.aal2 signaling: option of using an IP specific protocol over the IP network (column 13 lines 5-7) and also having a establish request message 4A-3 on the transport layer to the interworking gateway 50 and a establish request message 4A-3 includes the E164 address of the endpoint node and ALCAAL type 2 link characteristics, see column 13 lines 54-65).**

With regard to claim 4, Willars et al. further teach using said asynchronous transfer mode transport network in a radio access network wherein said existing protocol is access link control application protocol based on asynchronous transfer mode adaptation layer type 2 signaling . Willars **disclose having in fig. 3A ATM network ("ATM transport network") used in a radio access network with q.aal2 signaling which synonymous with Q.2630.1, see column 11 lines 26-28) and which is a ALCAP protocol, see column 4 lines 51).**

With regard to claim 5, Willars et al. further teach said asynchronous transfer mode adaptation layer type 2 signaling is based on Telecommunication Union Recommendation Q.2630, **Willars et disclose having q.aal2 signaling which synonymous with Q.2630.1, see column 11 lines 26-28).**

With regard to claim 6, Willars et al. further teach said user defined information element of an existing access link control application protocol is utilized a served user transport element of said Q. 2630 signaling, (**Willars et al. disclose having a served user generated reference (SUGR "information element") , a UGR used in IP-ALCAP protocol of the Q.2630.1 signaling (column 11 lines 46- 51).**

With regard to claim 7, Willars et al. further teach said served user transport element in said new protocol for conveying information needed by said existing access

link control application protocol, **(Willars et al. disclose having a served user generated reference (SUGR) interpreted as " served user transport element" and a SUGR used in IP- ALCAP protocol (column 11 lines 46-53). Willars further discloses have frame protocol data interpreted as "new protocol" sent along with a served user generated reference (SUGR) , (see col. 18 lines 22-49).**

With regard to claim 8, Willars et al. further teach including said served user transport element in an establish confirm message of said existing protocol, wherein said existing protocol comprises access link control application protocol, (**Willars et al. disclose having SUGR ("information element") within a q.aa2 establish confirmation message, see column 12 lines 40-42).**

With regard to claim 9, Willars et al. further teach including said served user transport element in an establish request message of said existing protocol, wherein said existing protocol comprises access link control application protocol,(**Willars et al. disclose SUGR ("information element") within an q.aa2 establish request message 3B-4 which is initiating a connection, see column 12 lines 32-35).**

With regard to claim 10, in Willars et al. further teach receiving an address information of an radio access network node, checking whether said address information is compatible with an address space of receiving protocol, and if said

address information is not compatible, determing an address of said inter-working function**. Willars et al. disclose having receiving a initiation response message with the address for a node 3B-N (" radio access node", e.g. an E. 164 address).., node 3B-26 queries database 54 to translate the E. 164 address received for node 3B-N to the IP address of the appropriate interworking gateway 50, see column 12 lines 14-24).**

With regard to claim 11, in combination Willars et al. Kumar and Caves et al. teaches the method recited in claim 10. wherein the determining of the address of said inter-working function is determined by default for each network node,(**Willars et al. disclose having a interworking function or interworking gateway represented by interworking gateway 50A ("inter-function", column 10 lines 29-38) and in order for a node to reach another node on the IP network it must transmitted to the appropriate interworking gateway 50 and node 3B-26 queries database 54 to translate the E. 164 address received for node 3B-N to the IP address of the appropriate interworking gateway 50 , see column 12 lines 14-24).**

With regard to claim 12, Willars et al. further teach querying the address of said inter-working function from a centralized location in said network. **Willars et al. disclose having a node 3B-26 queries database 54 to translate the E. 164 address received for node 3B-N to the IP address of the appropriate interworking gateway**

50 , see column 12 lines 14-24).

With regard to claim 13, Willars et al. further teach determining of the address of said inter-w0rkingfunction is determined based on a physical port from which an application protocol message was is received**. Willars et al. disclose the IP bearer signaling message 3B-3 includes the connection information for the interworking gateway 50 and the connection indicator ([IP address, endpoint identifier such as UDP port number, see column 12 43-47).**

With regard to claim 14, Willars et al. further teach determining the address of said inter-working function is determined based on a logical port from which application protocol message was received. **Willars et al. disclose the IP bearer signaling message 3B-3 includes the connection information for the interworking gateway 50 and the connection" indicator ([IP address, endpoint identifier such as UDP port number, see column 12 43-47). It is known in the art the IP address and the UDP port number is called a socket which is a logical port.**

With regard to claim 15, Willars et al. further teach checking comprises using a type of address information field that indicates at least one of aset including, a type of a network node, a type of address and a type of transport layer**. Willars et al. disclose having a process for interworking with Q.aal2 signaling option using an IP specific signaling protocol over the IP network, see column 13 lines 5-8) and the**

interworking gateway 50 queries the database 52 in order to translate the AAL2 network address, e.g., the E.164 address interpreted as "type of address", to an IP address of the endpoint , see column 13 lines 66-67 and column 14 lines 1-10). It is inferred the interworking gateway 50 check the AAL2 network address, e.g., the E. 164 address interpreted as a "type of address", address before further processing is initiated.

With regard to claim 16, Willars et al. further teach said checking comprises using a type of node information field that indicates at least one of a set including, a type of a network node, a type of address and a type of transport layer. **Willars et al. disclose having a process for interworking with Q.aal2 signaling option using an IP specific signaling protocol over the IP network (see column 13 lines 5-8)and the interworking gateway 50 queries the database 52 in order to translate the AAL2 network address, e.g., the E. 164 address interpreted as a "type of address", to an IP address of the endpoint, (see column 13 lines 66-67 and column 14 lines 1-10). It is inferred the interworking gateway 50 check the AAL2 network address, e.g., the E. 164 address before further processing is initiated.**

With regard to claim 17, Willars et al. further teach said checking comprises using a type of transport layer information field that indicates at least one of a set including,a type of a network node, a type of address and a type of transport layer**. Willars et al. disclose having a process for interworking with Q.aal2 signaling:**

option using an IP specific signaling protocol over the IP network (see column 13 lines 5-8)...the interworking gateway 50 queries interpreted as a "type of address", to an IP address of the endpoint (column 13 lines 66-67 and column 14 lines 1-10). It is inferred the interworking gateway 50 check the AAL2 network address, e.g., the E. 164 address before further processing is initiated.

With regard to claim 18 Willars et al. further teach making in said interworkinq function a mapping between afirst interface of said existing protocol and the second interface of said new protocol, wherein said mapping is based on information in said served user transport element. **Willars et al. disclose having a interworking function or interworking gateway represented by interworking gateway 50A interpreted as "inter-function", seecolumn 10 lines 29-38) and in fig. 4A the interworking gateway 50 queries the database 52 in order to translate the AAL2 network address, e.g., the E.164 address interpreted as a "type of address", to an IP address of the endpoint , (see column 3 lines 66-67 and column 1.4 lines 1-10). It is inferred the interworking gateway 50 check he AAL2 network address, e.g., the E.164 address interpreted as a "type of address", address before urther processing is initiated.**

With regard to claim 19, Willars et al. further teach implementing implementin,q said inter'working function as a stand-alone node in said asynchronous transfer mode transport network. **Willars disclose having a Willars et al. also disclose having . an**

interworking function or interworking gateway represented by interworking gateway 50A ("inter-function", column 10 lines 29-38) which is a stand-alone device in e database 52 in order to translate the AAL2 network address, e.g., the E. 164 address the ATM network (fig. 3B).

With regard to claim 20, Willars et al. further teach implementing said inter-working function as a stand-alone node in a transport network. **Willars disclose having a interworking function or interworking gateway represented by interworking gateway 50A ("inter-function", see column 10 lines 29-38) which is a stand-alone device in the ATM network , see fig. 3B).**

With regard to claim 21, Willars et al. further teach implementing said inter-working function as a part of a network node in said asynchronous transfer mode transport network**. Willars et al. disclose having a interworking function or interworking gateway represented by interworking gateway 50A ("inter-function", see column 10 lines 29-38)which is a stand-alone device in the ATM network, see fig. 3B).**

With regard to claim 22, Willars et al. further teach implementing said inter-working function as a part of a network node in a transport network. **Willars disclose having an interworking function or interworking gateway represented by**

interworking gateway 50A ("inter-function", columrl 10 lines 29-38) which is a stand-alone device in the ATM network (fig. 3B).

With regard to claim 23, Willars et al. further teach said transport network is based on internet protocol network**, (Willars et al. disclose having a transport network that uses IP specific signaling protocol over the IP network , (see column 6 lines 9-13 and column 13 lines 5-67).**

With regard to claim 24, Willars et al. teach a system comprising: a controller configured to implement an inter-working function, the inter-working function being linked with an asynchronous transfer mode transport network and an internet protocol transport network, wherein said inter-working function comprises a mapping entity that is configured to; cause sending and receiving a served user transport element of an existing protocol, that is used for establishing data transport bearers, to adapt a new protocol for controlling the transport bearers in a Transport Network Layer. **Willars et al. disclose having a interworking function or interworking gateway represented by interworking gateway 50A interpreted as a "inter-working function", column 10 lines 29-38) link with a ATM transport network , see fig. 3B). Willars et al. further transport bearer initiating procedure which utilizing the interworking with q.all2 signaling, see column 10 46,49) and uses a binding identification such as served user generated reference ("user defined information element")used in IP -ALCAP**

protocol establishing a transport bearer in the transport network, see column 11 lines 1-53).

However, Willars et al. does not. explicitly disclose cause conveyance transport related information between entities in the ATM and IP transport networks for controlling the transport bearers in the Transport network layer**(Kumar disclose having interworking of IP voice with ATM voice using server-based control, see title. Kumar further disclose the IWU 212 uses the ATM address information interpreted as " transport related information" forwarded by the VoIP call agent 214 to set-up an ATM path [such as a Switched Virtual Circuit (SVC) or an AAL2 channel] to the VoATM edge device of VoATM edge network 206, see col. 3 57-67).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a access scheme which is taught by Kumar into the Willars telecommunication system providing reliable interworking of two or more non-compatible packet-based voice technologies whereby seamlessly interworking different technologies.

The combination of Willar and Kumar does not explicitly disclose having a inter-working function to use to send a served user transport element of an existing protocol, **Benedyk et al. disclose having a methods and systems for routing messages in a radio access network, (see title) . Benedyk et al. further disclose**

having a RAN gateway 304 interworking between a ATM network and a IP–based network, (see fig. 5 and col. 6 lines s 1-5) whereby receiving Q.2630.1 message interpreted as a " existing protocol" which is known in the art a protocol to transmit served user transport ,(see col. 7 lines s 12-20).Although the served user transport element is not explicitly stated, it is inherited with a the Q.2630.1 protocol message.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a Q.2630.1 message which is taught by Benedyk et al. into Willar's modified telecommunication system in combination with Kumar efficiently utilizing network resources whereby ensuring quality of service. One will have the motivation to use a transport control protocol such as Q.2630.1 within a telecommunication system for efficiently establishing and releasing circuit switched AAL2 bearer channels.

With regard to claim 25 Willars et al. further teach said asynchronous transfer mode transport network is used in radio access network; and wherein said existing protocol is a...access link control application protocol based on asynchronous transfer mode adaptation layer type 2 signaling, **(Willars disclose having in fig. 3A a ATM network ("ATM transport network") used in a radio access network with q.aal2 signaling which synonymous with Q.2630.1, see column 11 lines 26-28) and which is a ALCAP protocol , see column 4 lines 51).**

With regard to claim 26, Willars et al. further teach International Telecommunication Union Recommendation Q.2630. **Willars et disclose having q.aal2 signaling which synonymous with Q.2630.1 , see column 11 lines 26-28).**

With regard to claim 27, Willars et al. further teach the inter-working function is further configured to utilize as said user defined information element of an existing protocol is a served user transport Element of said Q.2630 signaling. **Willars et al. disclose having a served user generated reference (SUGR "information element"). SUGR used in IP-ALCAP protocol of the Q.2630.1 signaling, see column 11 lines 46-51).**

With regard to claim 28, Willars et al. further teach the inter-working function is further configured to provide a checking entity configured to check whether an address information is compatible with an address space of receiving protocol, when receiving an address information of an radio access network node; and an address determining entity configured to determine an address of the said inter-working function**. Willars et al. disclose having receiving a initiation response message with the address for a node 3B-N interpreted as "radio access node", (e.g. an E.164 address) and node 3B-26 queries database 54 to translate the E. 164 address received for node 3B-N to the IP address of the appropriate interworking gateway 50, (see column 12 lines 14-24).**

With regard to claim 31, Willars et al. teach an apparatus comprising: a controller configured to control an inter-working function linked with an asynchronous transfer mode transport network and an internet protocol transport network. **Willars et al. disclose having a interworking function or interworking gateway represented by interworking and gateway 50A ("inter-function") and transport layer interworking gateway 50 providing connection to a ATM transport bearer, (see column 10 lines 29-38);** a mapper configured receive a served user transport element of an existing protocol to establish data transport bearers to adapt a new protocol to control the transport bearers in a transport network layer. **Willars et al. disclose having a interworking function or interworking gateway represented by interworking gateway 50A ("inter-function", column 10 lines 29- 38) and the transport bearer initiating procedure which utilizing the interworking with q.all2 signaling, see column 10 46-49) and uses a binding identification such as served user generated reference interpreted as "user defined information element" used in IP - ALCAP protocol establishing a transport bearer in the transport network, see column 11 lines 1-53). Willars et al. disclose having a interworking function that interface with IP and ATM networks, see column 6 lines 1-5).**

However, Willars et al. does not explicitly disclose having a conveyor configured to convey transport related information between entities and controlling the transport bearers in the transport network layer**. Kumar disclose having interworking of IP**

voice with ATM voice using server-based control, see title. Kumar further disclose the IWU 212 uses the ATM address information interpreted as " transport related information" forwarded by the VoIP call agent 214 to set-up an ATM path [such as a Switched Virtual Circuit (SVC) or an AAL2 channel] to the VoATM edge device of VoATM edge network 206, see col. 3 57-67).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a access scheme which is taught by Kumar into the Willars telecommunication system providing reliable interworking of two or more non-compatible packet-based voice technologies whereby seamlessly interworking different technologies.

The combination of Willar and Kumar does not explicitly disclose having a inter-working function to use to send a served user transport element of an existing protocol, **Benedyk et al. disclose having a methods and systems for routing messages in a radio access network, (see title) . Benedyk et al. further disclose having a RAN gateway 304 interworking between a ATM network and a IP–based network, (see fig. 5 and col. 6 lines s 1-5) whereby receiving Q.2630.1 message interpreted as a " existing protocol" which is known in the art a protocol to transmit served user transport ,(see col. 7 lines s 12-20).Although the served user transport element is not explicitly stated, it is inherited with a the Q.2630.1 protocol message.**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a Q.2630.1 message which is taught by Benedyk et al. into Willar's modified telecommunication system in combination with Kumar efficiently utilizing network resources whereby ensuring quality of service. One will have the motivation to use a transport control protocol such as Q.2630.1 within a telecommunication system for efficiently establishing and releasing circuit switched AAL2 bearer channels.

5. **Claims 29 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasson et al. (US Patent 6,728,261) in view of Willars et al. (US Patent 71072,329).

With regard to claim 29,Sasson teach an apparatus comprising: controlling means for controlling an inter-working function finked with an asynchronous transfer mode transport network and an internet protocol transport network; **Sasson et al. disclose having a interworking function ('apparatus", IWF)between ATM and IP protocols and networks (Abstract);** conveying means cause conveyance for conveying transport related information between entities in the asynchronous transfer mode and internet protocol transport networks for controlling the transport bearers in the transport network layer. **Sasson disclose having a IWF between a ATM network and a IP network ensuring end-to-end data transmission (fig 2 and column 3 lines 34-50).**

However, Sasson et al. does not explicitly disclose mapping means causing sending and receiving of a severed user transport element of an existing protocol for establishing data transport bearers to adapt a new protocol for controlling the transport bearers in a Transport Network Layer. **Willars et al. uses a binding identification such as served user generated reference ("user defined information element") used in IP -ALCAP protocol establishing a transport bearer in the transport network (column 11 lines 1-53). Willars et al. disclose having a Q.AAl2 known as Q.2630.1 protocol , (see col. 4 lines s 50-67). Willars et al. further disclose having a interworking mode the involves the interworking with q.aal2 signal interpreted as a " new protocol" , (see col.6 lines s 7-13). It is known in the art the Q.2630.1 is a transport control protocol which located in the transport network layer.**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a binding scheme and Q.2630. control protocol which taught by Willars into Sasson ATM-IP network reliably communicating user data whereby mapping radio control elements with a core network. One will have the motivation to use a transport control protocol such as Q.2630.1 within a telecommunication system for efficiently establishing and releasing circuit switched AAL2 bearer channels.

With regard to claim 30, the computer program claim is interpreted and rejected on the same grounds as the apparatus claim 29.

Prior Art

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Boudreaux (US Patent 6,466,556)

Widegreen et al. (US Patent 6,374,112)

Costa et al. (US Patent 6,668,170)

Niska (US Patent 6,985,734)

Andersson et al. (US Patent 6,912,390)

O'Neil (US Patent 7366,147)

Raivio et al. (US Patent 6,879,566)

Graf (US Patent 6,490,284)

Metzler (US Patent 7,260,088)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEWANDA SAMUEL whose telephone number is (571)270-1213. The examiner can normally be reached on Monday- Thursday 8:30-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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4/5/2010